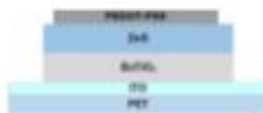




Hybrid AC Powder Electroluminescent Devices Fabricated by Bar Coating and Screen Printing

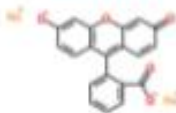
- Fabricate screen printed flexible white electroluminescent devices with reduced blue spectral component from ZnS phosphors
- Use bar coated organic chromophores mixtures to downshift ZnS phosphor emission to give broadband spectrum over large area

EXPERIMENT

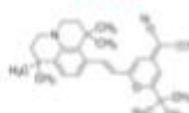


Screen printed ACPEL (10cmx10cm)

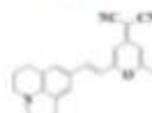
Fluorescein



DCJT8

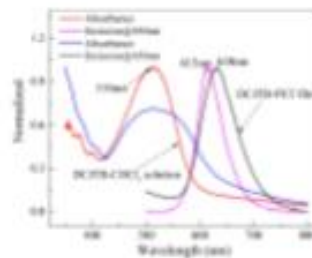
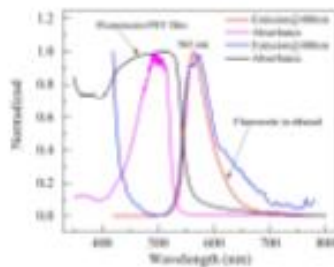


DCM2

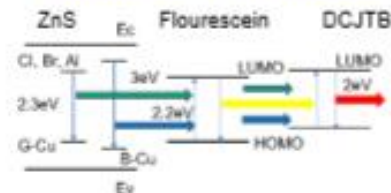


Process parameters: thread width, bar coating speed, temperature

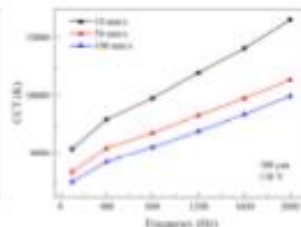
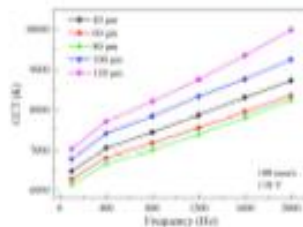
RESULTS & DISCUSSION



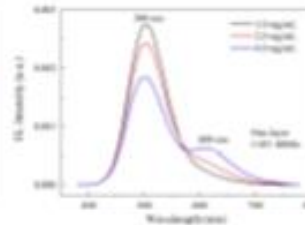
Downshifting Mechanism



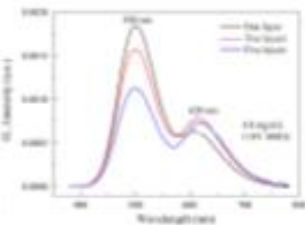
Process optimization: DCM2:Fluorescein = 3:1, 4 mg/ml



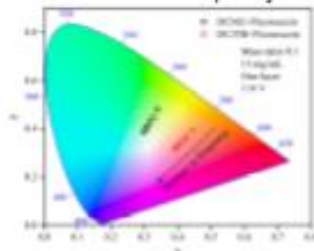
Effect of DCM2 concentration



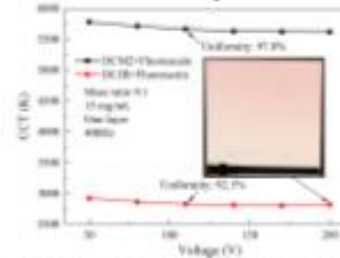
Effect of DCM2 thickness



Effect of AC frequency



Warm white hybrid ACPEL



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